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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/357,726

07/21/1999

DAVID L. WOOD

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9654

51344 7590 02/06/2007

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EXAMINER

MOORTHY, ARAVIND K

ART UNIT

PAPER NUMBER

2131

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/06/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/357,726

Applicant(s)

WOOD ET AL.

Examiner

Aravind K. Moorthy

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-12, 17-26, 30-35 and 38-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-12, 17-26, 30-35 and 38-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. This is in response to the communications filed on 31 October 2006.
2. Claims 10-12, 17-26, 30-35 and 38-59 are pending in the application.
3. Claims 10-12, 17-26, 30-35 and 38-59 have been rejected.
4. Claims 1-9, 13-16, 27-29, 36 and 37 have been cancelled.

***Response to Arguments***

5. Applicant's arguments with respect to claims 10-12, 17-26, 30-35 and 38-57 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 54 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 54 recites the limitation "between servers" in the claim. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**7. Claims 10, 17-26, 30, 31, 34, 35, 42, 43, 45-47, 51 and 53-57 are rejected under 35 U.S.C. 102(e) as being anticipated by Dixon U.S. Patent No. 6,289,461 B1.**

As to claim 10, Dixon discloses that the request and the response message validatings are respectively performed at first and second secure data brokers on opposing sides of the security barrier [column 4 line 58 to column 5 line 4]. Dixon discloses that the validated request and response message transmissions are between the first and second secure data brokers [column 4 line 58 to column 5 line 4].

As to claim 17, Dixon discloses in a networked computing environment, a method of securing access to an information resource behind a security barrier, the method comprising:

predefining a request message specification corresponding to a structured request language [column 6 line 43 to column 7 line 27];

formatting an access request in accordance with the structured request language [column 6 line 43 to column 7 line 27];

supplying the formatted access request to a first intermediary, the intermediary validating the formatted access request in accordance with the request message specification [column 6 line 43 to column 7 line 27]; and

forwarding the validated access request across the security barrier [column 6 line 43 to column 7 line 27].

As to claim 18, Dixon discloses accessing the information resource in accordance with the validated access request [column 6 line 43 to column 7 line 27].

As to claim 19, Dixon discloses a method further comprising:

receiving, at an application proxy, an access request targeting the information resource [column 6 line 43 to column 7 line 27]; and

performing the access request formatting at the application proxy [column 6 line 43 to column 7 line 27].

As to claim 20, Dixon discloses a method further comprising:

predefining a response message specification corresponding to a structured response language [column 6 line 43 to column 7 line 27];

formatting a response to the access request in accordance with the structured language [column 6 line 43 to column 7 line 27];

supplying the formatted response to a second intermediary, the second intermediary validating the formatted response in accordance with the response message specification [column 6 line 43 to column 7 line 27]; and

forwarding a validated response across the security barrier [column 6 line 43 to column 7 line 27].

As to claims 21 and 23, Dixon discloses a method further comprising:

accessing the information resource in accordance with an access request from a client [column 7, lines 28-60]; and

supplying the client with a response in accordance with the validated response [column 7, lines 28-60].

As to claim 22, Dixon discloses in a networked computing environment, a method of securing access to an information resource behind a security barrier, the method comprising:

predefining a response message specification corresponding to a structured response language [column 6 line 43 to column 7 line 27];

formatting a response to an access request targeting the information resource, the formatted response being in accordance with the structured response language [column 6 line 43 to column 7 line 27];

supplying the formatted response to an intermediary, the intermediary validating the formatted response in accordance with the response message specification [column 6 line 43 to column 7 line 27]; and

forwarding a validated response across the security barrier [column 6 line 43 to column 7 line 27].

As to claim 24, Dixon discloses an information security system comprising:

a security barrier [column 6 line 43 to column 7 line 27];

a proxy for an information resource, the proxy and the information resource on opposing first and second sides, respectively, of the security barrier [column 6 line 43 to column 7 line 27];

a data broker on the first side of the security barrier, wherein, in response to an access request targeting the information resource, the data broker validates a request message encoded in a structured request language against a predefined

request message specification therefor and forwards only validated request messages across the security barrier [column 6 line 43 to column 7 line 27].

As to claim 25, Dixon discloses an information security system further comprising:

a second data broker on the second side of the security barrier, wherein, in response to an access targeting the information resource [column 6 line 43 to column 7 line 27], the second data broker validates a response message against a predefined response message specification and forwards only validated response messages across the security barrier [column 6 line 43 to column 7 line 27].

As to claim 26, Dixon discloses the information resource [column 7, lines 28-60].

As to claim 30, Dixon discloses a computer program product encoded in computer readable media, the computer program product comprising:

data broker code and parser code executable on a first network server separated from an information resource by a security barrier [column 6 line 43 to column 7 line 27];

the data broker code including instructions executable as a first instance thereof to receive access requests in a structured language corresponding to a predefined request message specification and to forward validated ones of the access requests across the security barrier toward the information resource [column 6 line 43 to column 7 line 27]; and

the parser code including instructions executable as a first instance thereof to validate the received access requests against the predefined request message specification [column 6 line 43 to column 7 line 27].

As to claim 31, Dixon discloses an encoding of the predefined request message specification [column 6 line 43 to column 7 line 27].

As to claim 34, Dixon discloses the computer program product further comprising:

application proxy code including instructions executable to format the access requests in accordance with the structured language corresponding to the predefined request message specification [column 6 line 43 to column 7 line 27].

As to claim 35, Dixon discloses the computer program product encoded by or transmitted in at least one computer readable medium selected from the set of a disk, tape or other magnetic, optical, or electronic storage medium and a network, wireline, wireless or other communications medium [column 6 line 43 to column 7 line 27].

As to claim 42, Dixon discloses a method of securing a data transaction across a security barrier, the method comprising:

validating a request message encoded in a structured request language against a predefined request message specification therefor [column 6 line 43 to column 7 line 27];

transmitting the validated request message across the security barrier [column 6 line 43 to column 7 line 27];

validating a response message encoded in a structured response language against a predefined response message specification therefor, the response message corresponding to the validated request [column 6 line 43 to column 7 line 27]; and



transmitting the validated response message across the security barrier  
[column 6 line 43 to column 7 line 27].

As to claim 43, Dixon discloses that the request and response message specifications are predefined in accordance with valid request and response message constraints specific to an information resource [column 6 line 43 to column 7 line 27].

As to claim 45, Dixon discloses a method further comprising:

receiving, at an application proxy, an access request targeting an information resource [column 6 line 43 to column 7 line 27];

formatting the request message in a structured language corresponding to the request message specification [column 6 line 43 to column 7 line 27]; and

transmitting the formatted request message to a secure data broker for the request message validating [column 6 line 43 to column 7 line 27].

As to claim 46, Dixon discloses a method further comprising:

formatting the response message in a structured language corresponding to the response message specification [column 6 line 43 to column 7 line 27]; and

transmitting the formatted response message to a secure data broker for the response message validating [column 6 line 43 to column 7 line 27].

As to claim 47, Dixon discloses a method further comprising:

accessing an information resource in accordance with the validated request message [column 7, lines 28-60]; and

preparing the response message in accordance with the access [column 7, lines 28-60].

As to claim 51, Dixon discloses that at least one of the validated request message transmitting and the validated response message transmitting is via a secure protocol [column 7, lines 28-60].

As to claim 53, Dixon discloses that the security barrier includes a firewall [column 3, lines 33-48].

As to claim 54, Dixon discloses that the security barrier includes a secure communication channel between servers [column 3, lines 33-48].

As to claim 55, Dixon discloses in a networked information environment including a client and an information resource separated by a security barrier, an information security system comprising:

means for proxying an access request by the client targeting the information resource and for preparing a request message corresponding to the access request in a structured language corresponding to a predefined request message specification [column 6 line 43 to column 7 line 27];

means for validating the request message against the predefined request message specification and forwarding only validated request messages across the security barrier [column 6 line 43 to column 7 line 27].

As to claim 56, Dixon discloses means for validating a response message against a predefined response message specification and forwarding only validated response messages across the security barrier [column 6 line 43 to column 7 line 27].

As to claim 57, Dixon discloses an information security system further comprising the security barrier [column 6 line 43 to column 7 line 27].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**8. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dixon U.S. Patent No. 6,289,461 B1 as applied to claim 42 above, and further in view of Ottensooser U.S. Patent No. 5,905,856.**

As to claims 11 and 12, Dixon does not teach that the request message validating includes parsing the request message using Data Type Definitions (DTDs) encoding a hierarchy of valid tag-value pairs in accordance with syntax of a valid request message. Dixon does not teach that if the request message is not successfully parsed, forwarding a response message without transmission of the request message across the security barrier. Dixon does not teach that the response message validating includes parsing the response message using Data Type Definitions (DTDs) encoding a hierarchy of tag-value pairs in accordance with syntax of a valid response message.

Ottensooser teaches parsing the request message using Data Type Definitions (DTDs) encoding a hierarchy of valid tag-value pairs in accordance with syntax of a valid request/response message [column 7, lines 58-64; column 10 line 66 to column 11 line 30].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Dixon so that gateway of Borella would have parsed the request message using data type definitions, encoding a hierarch of valid-tag pairs in

accordance with the syntax of a valid request message. If the request message were not successfully parsed, an alert message would have been forwarded across the firewall.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Dixon by the teaching of Ottensooser because the structure permits the use of a simple language that allows the user to write a set of tests that closely match the business activities under scrutiny. The language is sufficiently high level so that the user does not have to be involved in the highly technical "behind the scenes" type work that actually tells the computer application what to do. Other products on the market are not as advanced and rely on the skills of computer programmers to write test plans rather than business users [column 13, lines 47-58].

**9. Claims 32, 33, 38-41, 48-50, 52, 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dixon U.S. Patent No. 6,289,461 B1 as applied to claims 17, 24, 30 and 42 above, and further in view of Bobo, II U.S. Patent No. 5,870,549.**

As to claim 32, Dixon discloses that the data broker code and parser code are also executable on a second network server separated from a client application by the security barrier [column 3, lines 33-48]. Dixon discloses that the data broker code includes instructions executable as a second instance thereof to receive responses corresponding to a predefined response message specification and to forward validated ones of the responses across the security barrier toward the client application [column 3 line 65 to column 4 line 19]. Dixon discloses that the parser code includes instructions executable as a second instance thereof to validate the received responses against the predefined response message specification [column 3 line 65 to column 4 line 19].

Bobo teaches the translation of messages into XML format [column 21, lines 37-42].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have the gateway as taught by Dixon to format the outgoing packets to the XML structured language.

It would have been obvious to have modified Dixon by the teaching of Bobo because XML is easier to write applications for, easier to understand, and more suited to delivery and inter-operability over the Web [column 21 lines 33-37].

As to claim 33, Dixon teaches an encoding of the predefined response message specification [abstract].

As to claims 38-41, 48-50, 52, 58 and 59, Dixon does not teach that the structured request language includes a markup language. Dixon does not teach that the markup language includes eXtensible markup language.

Bobo teaches the translation of messages into XML format [column 21, lines 37-42].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have the gateway as taught by Dixon to format the outgoing packets to the XML structured language.

It would have been obvious to have modified Dixon by the teaching of Bobo because XML is easier to write applications for, easier to understand, and more suited to delivery and inter-operability over the Web [column 21 lines 33-37].

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**10. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dixon U.S. Patent No. 6,289,461 B1 as applied to claim 42 above, and further in view of Applied Cryptography (hereinafter Schneier).**

As to claim 3, Dixon does not teach that at least one of the request and response message specifications is cryptographically secured.

Schneier teaches the use and benefits of encryption, page 2.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time invention was made to have modified Dixon so that the request and response messages were cryptographically secured.


It would have been obvious to modify Dixon by the teaching of Schneier because cryptography offers authentication, integrity and nonrepudiation, page 2.

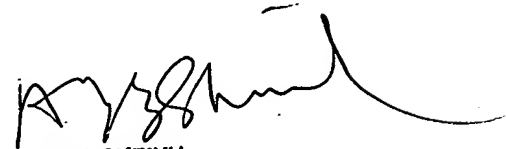
***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aravind K. Moorthy whose telephone number is 571-272-3793. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Aravind K Moorthy   
February 2, 2007

  
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